

**Claims:**

1. A computer implemented method for diagnosing failures in a machine comprising:

accessing machine data; and

associating the machine data with at least one potential or actual fault indicia to determine at least one potential or actual fault, wherein the fault indicia guides the computer to a location other than the starting point of a fault tree to determine a diagnostic path within the fault tree.

2. The method of Claim 1 wherein the machine data is received in a log file.

3. The method of Claim 1 further comprising associating one or more fault patterns with a fault tree to determine a diagnosis for one or more faults.

4. The method of Claim 1 wherein the fault patterns are represented by one or more filters.

5. A method for guiding a computer system through a diagnosis process of a machine comprising:

receiving data from a machine; and

recognizing at least one potential or actual fault indicia in the data, where at least one potential or actual fault indicia guides the computer system to a point in a fault tree other than a starting point in the fault tree.

6. The method of Claim 5 further comprising determining a fault in the machine based upon one or more fault patterns.

7. The method of Claim 6 further comprising determining a diagnostic of the fault in the machine based upon the fault tree.

Pub A1 > 8. A method for diagnosing at least one potential or actual fault in a machine comprising:

analyzing data from the machine to determine a fault indicia for at least one potential or actual fault; and

applying the fault indicia to a fault tree having a starting point and being representative of the machine, the fault indicia being applied at a location other than the starting point of the fault tree to determine a diagnostic path within the fault tree.

9. The method of Claim 8 wherein the analyzing further comprises applying the data to one or more filters.

Pub A1 > 10. The method of Claim 8 wherein the data is in a log data file format.

11. A system for diagnosing at least one potential or actual fault in a machine comprising:

a communications module for communicating machine data between the machine and the system;

a fault recognition module for analyzing the machine data to determine at least one potential or actual faults; and

*Sub A1*

an expert system module having a fault tree with a starting point, where the expert system module is guided through the fault tree at a location other than the starting point of the fault tree by the determination of at least one potential or actual faults by the fault recognition module.

**12. A system comprising:**

a machine coupled to a computer network, wherein the machine measures performance data of itself; and

a diagnostic system coupled to the computer network, wherein the diagnostic system analyzes the performance data to determine if at least one potential or actual faults exists in the performance data of the machine, and where such indication occurs, a diagnosis of at least one or more potential or actual faults as indicated at a location other than the starting point of a fault tree.

**13. A computer implemented method for diagnosing failures in a machine comprising:**

accessing machine data;

associating the machine data with at least one potential or actual fault patterns to determine at least one fault; and

guiding an expert system to a location other than the starting point of a fault tree, based upon at least one potential or actual fault.